a preservative in the manufacture and coating of paper and paperboard intended for use in contact with food in accordance with the following prescribed conditions:

(a) It is used as follows:

(1) In the manufacture of paper and paperboard as a preservative for substances added to the pulp suspension prior to the sheet-forming operation provided that the preservative is volatilized by heat in the drying and finishing of the paper and paperboard.

(2) As a preservative for coatings for paper and paperboard, *Provided*, That the preservative is volatilized by heat in the drying and finishing of the coated paper or paperboard.

(b) The quantity used shall not exceed the least amount reasonably required to accomplish the intended technical effect and shall not be intended to nor, in fact, accomplish any physical or technical effect in the food itself.

(c) The use of a preservative in any substance or article subject to any regulation in parts 174, 175, 176, 177, 178 and § 179.45 of this chapter must comply with any specifications and limitations prescribed by such regulation for the substance or article.

§ 176.250 Poly-1,4,7,10,13-pentaaza-15-hydroxyhexadecane.

Poly-1,4,7,10,13-pentaaza-15-hydroxyhexadecane may be safely used as a retention aid employed prior to the sheet-forming operation in the manufacture of paper and paperboard intended for use in contact with food in an amount not to exceed that necessary to accomplish the intended physical or technical effect and not to exceed 6 pounds per ton of finished paper or paperboard.

§ 176.260 Pulp from reclaimed fiber.

(a) Pulp from reclaimed fiber may be safely used as a component of articles used in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of paragraph (b) of this section.

(b) Pulp from reclaimed fiber is prepared from the paper and paperboard products described in paragraphs (b) (1) and (2) of this section, by repulping with water to recover the fiber with the least possible amount of nonfibrous substances.

(1) Industrial waste from the manufacture of paper and paperboard products excluding that which bears or contains any poisonous or deleterious substance which is retained in the recovered pulp and that migrates to the food, except as provided in regulations promulgated under sections 406 and 409 of the Federal Food, Drug, and Cosmetic Act.

(2) Salvage from used paper and paperboard excluding that which (i) bears or contains any poisonous or deleterious substance which is retained in the recovered pulp and that migrates to the food, except as provided in regulations promulgated under sections 406 and 409 of the act or (ii) has been used for shipping or handling any such substance.

§ 176.300 Slimicides.

(a) Slimicides may be safely used in the manufacture of paper and paperboard that contact food, in accordance with the following prescribed conditions:

(1) Slimicides are used as antimicrobial agents to control slime in the manufacture of paper and paperboard.

(2) Subject to any prescribed limitations, slimicides are prepared from one or more of the slime-control substances named in paragraph (c) of this section to which may be added optional adjuvant substances as provided for under paragraph (d) of this section.

(3) Slimicides are added to the process water used in the production of paper or paperboard, and the quantity added shall not exceed the amount necessary to accomplish the intended technical effect.

(b) To insure safe usage, the label or labeling of slimicides shall bear adequate directions for use.

(c) Slime-control substances permitted for use in the preparation of slimicides include substances subject to prior sanction or approval for such use and the following:

List of substances	Limitations
Acrolein.	
Alkenyl (C_{16}–C_{18}) dimethylethyl-ammonium bromide.	
n-Alkyl (C_{12}–C_{18}) dimethyl benzyl ammonium chloride.	
1,2-Benzisothiazolin-3-one	At a level of 0.06 pound per ton of dry weight fiber.
Bis(1,4-bromoacetoxy)-2-butene.	
5,5-Bis(bromoacetoxymethyl) *m*-dioxane.	
2,6-Bis(dimethylaminomethyl) cyclohexanone.	
1,2-Bis(monobromoacetoxy) ethane [CA Reg. No. 3785–34–0]	At a maximum level of 0.10 pound per ton of dry weight fiber.
Bis(trichloromethyl)sulfone.	
4-Bromoacetoxymethyl-*m*-dioxolane.	
2-Bromo-4′-hydroxyacetophenone.	
2-Bromo-2-nitropropane-1,3-diol (CAS Reg. No. 52–51–7)	At a maximum level of 0.6 pound per ton of dry weight fiber.
β-Bromo-β-nitrostyrene	At a maximum level of 1 pound per ton of dry weight fiber.
Chloroethylenebisthiocyanate.	
5-Chloro-2 - methyl - 4 - isothiazolin-3-one calcium chloride and 2-methyl-4-isothiazolin-3-one calcium chloride mixture at a ratio of 3 parts to 1 part.	At a level of 2.5 pounds per ton of dry weight fiber.
Chlorinated levulinic acids.	
Chloromethyl butanethiolsulfonate.	
Cupric nitrate.	
n-Dialkyl (C_{12}–C_{18}) benzylmethylammonium chloride.	
1,2-Dibromo-2,4-dicyanobutane (CAS Reg. No. 35691–65–7)	At a maximum level of 0.005% of dry weight fiber.
2,2-Dibromo-3-nitrilopropionamide	At a maximum level of 0.1 lb/ton of dry weight fiber.
2,3-Dibromopropionaldehyde.	
4,5-dichloro-1, 2-dithiol-3-one (CAS Reg. No. 1192–52–5)	For use only at levels not to exceed 10 milligrams per kilogram in the pulp slurry.
3,5-Dimethyl 1,3,5,2*H*-tetrahydrothiadiazine-2-thione.	
Dipotassium and disodium ethylenebis(dithiocarba-mate).	
Disodium cyanodithioimidocarbonate.	
n-Dodecylguanidine hydrochloride	At a maximum level of 0.20 pound per ton of dry weight fiber.
Glutaraldehyde (CAS Reg. No. 111-30-8).	
2-(*p*-hydroxyphenyl) glyoxylohydroximoyl chloride (CAS Registry No. 34911–46–1).	At a level of 0.02 pound per ton of dry weight fiber.
2-Hydroxypropyl methanethiol sulfonate.	
2-Mercaptobenzothiazole.	
Methylenebisbutanethiolsulfonate.	
Methylenebisthiocyanate.	
2-Nitrobutyl bromoacetate [CA Reg. No. 32815–96–6]	At a maximum level of 0.15 pound per ton of dry weight fiber.
N-[α-(Nitroethyl)benzyl] ethylenediamine.	
Potassium 2-mercaptobenzothiazole.	
Potassium *N*-hydroxymethyl-*N*-methyldithiocarba-mate.	
Potassium *N*-methyldithiocarbamate.	
Potassium pentachlorophenate.	
Potassium trichlorophenate.	
Silver fluoride	Limit of addition to process water not to exceed 0.024 pound, calculated as silver fluoride, per ton of paper produced.
Silver nitrate.	
Sodium dimethyldithiocarbamate.	
Sodium 2-mercaptobenzothiazole.	
Sodium pentachlorophenate.	
Sodium trichlorophenate.	
1,3,6,8-Tetraazatricyclo[6.2.1.13,6] dodecane.	
3,3,4,4-Tetrachlorotetrahydrothiophene-1,1-dioxide.	
Tetrakis(hydroxymethyl)phosphonium sulfate (CAS Reg. No. 55566–30–8).	Maximum use level of 84 mg/kg in the pulp slurry. The additive may also be added to water, which when introduced into the pulp slurry, results in a concentration in the pulp slurry not to exceed 84 mg/kg.
2-(Thiocyanomethylthio) benzothiazole.	
Vinylene bisthiocyanate.	

(d) Adjuvant substances permitted to be used in the preparation of slimicides include substances generally recognized as safe for use in food, substances generally recognized as safe for use in paper and paperboard, substances permitted to be used in paper and paperboard by other regulations in this chapter, and the following:

Acetone.
Butylene oxide.
Dibutyl phthalate.
Didecyl phthalate.
N,N-Dimethylformamide.
Dodecyl phthalate.
Ethanolamine.
Ethylene glycol.
Ethylenediamine.

N-methyl-2-pyrrolidone (CAS Reg. No. 872–50–4).

a,a′-[Methylenebis[4-(1,1,3,3-tetramethylbutyl)-*o*-phenylene]] *bis*[*omega*-hydroxypoly(oxyethylene)] having 6–7.5 moles of ethylene oxide per hydroxyl group.

Monomethyl ethers of mono-, di-, and tripropylene glycol.

Nonylphenol reaction product with 9 to 12 molecules of ethylene oxide.

Octylphenol reaction product with 25 molecules of propylene oxide and 40 molecules of ethylene oxide.

[42 FR 14554, Mar. 15, 1977, as amended at 42 FR 41854, Aug. 19, 1977; 44 FR 75627, Dec. 21, 1979; 46 FR 36129, July 14, 1981; 49 FR 5748, Feb. 15, 1984; 51 FR 19059, May 27, 1986; 51 FR 43734, Dec. 4, 1986; 54 FR 18103, Apr. 27, 1989; 55 FR 31825, Aug. 6, 1990; 64 FR 46130, Aug. 24, 1999; 64 FR 69900, Dec. 15, 1999]

§ 176.320 Sodium nitrate-urea complex.

Sodium nitrate-urea complex may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) Sodium nitrate-urea complex is a clathrate of approximately two parts urea and one part sodium nitrate.

(b) Sodium nitrate-urea complex conforming to the limitations prescribed in paragraph (b)(1) of this section is used as provided in paragraph (b)(2) of this section.

(1) *Limitations.* (i) It is used as a plasticizer in glassine and greaseproof paper.

(ii) The amount used does not exceed that required to accomplish its intended technical effect or exceed 15 percent by weight of the finished paper.

(2) *Conditions of use.* The glassine and greaseproof papers are used for packaging dry food or as the food-contact surface for dry food.

§ 176.350 Tamarind seed kernel powder.

Tamarind seed kernel powder may be safely used as a component of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food, subject to the provisions of this section.

(a) Tamarind seed kernel powder is the ground kernel of tamarind seed (*Tamarindus indica* L.) after removal of the seed coat.

(b) It is used in the manufacture of paper and paperboard.

PART 177—INDIRECT FOOD ADDITIVES: POLYMERS

Subpart A [Reserved]

Subpart B—Substances for Use as Basic Components of Single and Repeated Use Food Contact Surfaces

Sec.